CLAIMS

1. A transmission system comprising at least a transmitter, a transmission network having a time varying state, and a receiver, said transmitter comprising an encoder for generating redundancy packets (R(i)) from media packets (M(i)) so as to provide an error correction capability of a certain number of packets (Q(k)) at said receiver, said correction capability depending on the amount of redundancy (n-k) generated by said encoder, said receiver comprising an analyser for analysing the packet errors occurring on the transmission network, and for computing an optimal amount of redundancy that gives an error correction capability allowing to respect a maximum tolerated packet error rate (PER_{MAX}), said optimal amount of redundancy being fed back to said transmitter so as to be used by said encoder.

2. A transmission system as claimed in claim 1, wherein said transmitter comprises a media source for delivering said media packets with an adaptable media bitrate, and said encoder is designed to send to said media source an order for adapting said media bitrate depending on the amount of redundancy currently added by the encoder.

3. A transmission system as claimed in claim 1, wherein (n-k) redundancy packets are generated from k media packets so as to form a transmission block of n packets, and said analyser is designed to:
a) keep a history of the number B_i of packet errors in a transmission block,
b) and for different values of k:
- calculate a mean value C(k) of the number $C_i(k)$ of packet errors in a transmission block after correction with an error correction capability of Q(k),
- calculate the corresponding packet error rate (C(k)/n),
- compare the corresponding packet error rate with said maximum tolerated packet error rate (PER_{MAX}) for selecting said optimal value of k.

4. A receiver for receiving media packets and redundancy packets transmitted by a transmitter via a transmission network having a time-varying state, said redundancy packets being generated from said media packets so as to provide an error correction capability of a certain number of packets at said receiver, said correction capability depending on the

amount of redundancy generated at the transmitter, said receiver comprising:
- an analyser for analysing the packet errors occurring on the transmission network and for computing an optimal amount of redundancy that gives an error correction capability allowing to respect a maximum tolerated packet error rate (PER_{MAX}), and
- feedback means for feeding back said optimal amount of redundancy to said transmitter.

5. A receiver as claimed in claim 4, intended to receive transmission blocks of n packets comprising k media packets and (n-k) redundancy packets generated from said k media packets, wherein said analyser is designed to:
a) keep a history of the number B_i of packet errors in a transmission block,
b) and for different values of k:
- calculate a mean value C(k) of the number $C_i(k)$ of packet errors in a transmission block after correction with an error correction capability of Q(k),
- calculate the corresponding packet error rate (C(k)/n),
- compare the corresponding packet error rate with said maximum tolerated packet error rate (PER_{MAX}) for selecting said optimal value of k.

6. A receiver as claimed in claim 4, wherein the received media packets an intended to be used by an application, and said maximum tolerated packet error rate is set by said application.

7. A transmitter for transmitting packets to a receiver via a transmission network having a time varying state, said transmitter comprising an encoder for generating redundancy packets from media packets so as to provide an error correction capability of a certain number of packets at the receiver, said correction capability depending on the amount of redundancy generated by said encoder, and said encoder being designed to set said amount of redundancy to an optimal value that gives an error correction capability allowing to respect a maximum tolerated packet error rate defined at the receiver, said optimal value being fed back to said transmitter by said receiver.

8. A transmitter as claimed in claim 7, comprising a media source for delivering said media packets with an adaptable media bitrate, wherein said encoder is designed to send to said media source an order for adapting said media bitrate depending on the amount of redundancy currently added by the encoder.

9. A method for determining an amount of redundancy to be used in a forward error correction scheme in which redundancy packets are generated from media packets at a transmitter side so as to provide a correction capability of a certain number of packets at a receiver side, said method comprising the steps of:

- analysing the packet errors occurring on the transmission network, at the receiver side,
- computing an optimal amount of redundancy that gives an error correction capability allowing to respect a maximum tolerated packet error rate, at the receiver side,
- feeding back said optimal amount of redundancy to the transmitter.

10. A program comprising instructions for implementing a method as claimed in claim 9 when said program is executed by a processor.